APPARATUS AND METHOD FOR ELECTROCHEMICAL CELL COMPONENTS

ABSTRACT

A component for an electrochemical cell comprises a thermally and electrically conductive core with an active area substantially covered by an electrically and thermally conductive polymeric composite, wherein the conductive polymeric composite is adhered to the core by an adhesion promoter. The electrically conductive polymeric composite preferably comprises a thermosetting polybutadiene- or polyisoprene-based resin system and an electrically conductive filler. The component is resistant to chemical attack and hydrolysis, and has excellent mechanical strength and toughness. Components may be manufactured having a volume resistivity of about 0.500 ohm-cm or less and a thermal conductivity of at least about 5 watts/meter ^{o}K,. In addition, the component is economical to produce due to inexpensive starting materials as well as the use of conventional processing equipment.